

Remarks

Reconsideration of this Application is respectfully requested.

Claims 1, 3, 4, 6-9, 11-15, 18, and 26-29 are pending in the application, with 1, 4, 7, 11, 12 and 18 being the independent claims. Claim 12 has been amended to correct a minor typographical error. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the foregoing amendments and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejections under 35 U.S.C. § 102

Chater-Lea

In the Office Action, claims 1 and 4 were rejected under 35 U.S.C. § 102(e) as being allegedly anticipated by Chater-Lea, U.S. Patent No. 5,822,314 (Chater-Lea). Applicants respectfully traverse this rejection.

In Chater-Lea, the base station 21 transmits frame numbering information and the mobile station 25 transmits a received frame number as part of a registration request. (Chater-Lea, col. 5, lines 16 to 20). From the received frame number, the base station calculates a timing offset and transmits it to the mobile station (Chater-Lea, col. 5, lines 20 to 23). That is, a delay in frame number corresponding to a round-trip time is determined.

In Applicants' claimed invention, it is the mobile transceiver and not the base station that transmits an indication of the time slot in which the transmission was made.

Hence, the additional step of having the base station transmit the indication, and requiring the mobile transceiver to echo this indication back are avoided.

Thus, Chater-Lea does not teach or suggest "receiving a burst transmission from the mobile transceiver in one of said time slots, the burst transmission including a time slot indication indicating the one of the time slots within which the burst was transmitted," as recited in independent claim 1. Furthermore, Chater-Lea does not teach or suggest "transmitting from the mobile transceiver a burst transmission in said selected time slot, the transmission including a time slot indication indicating the selected time slot," as recited in independent claim 4. For at least this reason, claims 1 and 4 are patentable over Chater-Lea.

Furthermore, in Chater-Lea, the timing offset is calculated as the difference between the sent frame number and the received frame number. Chater-Lea, col. 7, lines 2-24; FIG. 5). Thus, the base station indicates the offset as an integral number of frames.

In contrast, Applicants' timing correction value takes into account the timing of reception of burst, a common delay, for all MANS and the size of slots (e.g. SMS) multiplied by the slot number, among other factors. Thus, the timing correction value is a time period and not an integral number of frames (Specification, p.13, lines 4-18). Chater-Lea does not teach or suggest "a timing correction value for the mobile transceiver so as to synchronise the transmission timing of said mobile transceiver with a reference timing," as recited in independent claim 1. Chater-Lea also does not teach or suggest "adjusting the timing of a subsequent transmission by the mobile transceiver according to said timing correction value," as recited in independent claim 4. For at least this further reason, claims 1 and 4 are patentable over Chater-Lea.

Applicants submit that Chater-Lea does not teach or suggest every feature recited in Applicants' independent claims 1 and 4. For at least these reasons, independent claims 1 and 4 are patentable over Chater-Lea. Reconsideration and withdrawal of the grounds of rejection are therefore respectfully requested.

Sasaki

Claims 7-9 were rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Sasaki, U.S. Patent No. 3,641,274 (Sasaki). Applicants respectfully traverse this rejection.

Sasaki describes a system for controlling synchronization of a communications network, in which predicted arrival times for burst transmissions are stored. (Sasaki, col. 2, lines 25-31). These predicted arrival times are compared to the actual arrival times of the bursts to determine correction times. Subsequently, the predicted arrival times are corrected using the determined correction times. The corrected predictions of the arrival times are then stored for future use. (Sasaki, col. 3, lines 50-64 and col. 9, lines 50-71).

In contrast, Applicants' independent claim 7 recites "controlling a subsequent transmission by the transceiver according to the timing correction value and according to a timing uncertainty value as a function of time elapsed since reception of the timing correction value." The timing uncertainty value depends on the time elapsed since the transceiver received the timing correction value. This timing uncertainty value indicates the rate at which the timing of the transceiver is likely to change. That is, the timing uncertainty value indicates the precision of the timing correction value received. The transceiver controls transmissions according to both the timing correction value and the timing uncertainty value. For example, if the determined timing uncertainty value is

greater than a predetermined value, the transceiver reverts to the random access timing correction process. (Specification, FIG. 7; page 15, lines 23-31).

Applicants submit that Sasaki does not teach or suggest every feature recited in Applicants' independent claim 7. For at least the above reasons, independent claim 7 is patentable over Sasaki. Claims 8 and 9 depend from claim 7. For at least these reasons, and further in view of their own features, claims 8 and 9 are patentable over Sasaki. Reconsideration and withdrawal of this ground of rejection are therefore requested.

Cooper

In the Office Action, claims 11-15, 26-28 were rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Cooper, U.S. Patent No. 5,646,947 (Cooper). Applicants respectfully traverse this rejection.

Applicants submit that Cooper does not teach or suggest every feature recited in Applicants' independent claims 11 and 12. Cooper describes the transmission of a bit stream, wherein each bit stream includes a stream of data frames. The bit stream includes a unique word corresponding to each data frame (Cooper, see abstract and col. 4, lines 29-34). Thus, Cooper relates to transmission of bit streams rather than data bursts. Bit streams are generally known to be continuous sequences of bits, representing a stream of data, transmitted continuously over a communications path. In contrast, Applicants' claimed invention relates to burst transmission of data. Burst transmission or data bursts are commonly understood as the transmission of data at a very high signaling rate at a very short transmission time.

Cooper does not teach or suggest a "wireless link signal for wireless transceiver communication comprising a data burst," as recited in claims 11 and 12. Thus, for at least this reason, claims 11 and 12 are patentable over Cooper.

Furthermore, in Cooper, "each voice frame contains 768 bits preceded by a unique word" (Cooper, col. 4, lines 31-33). Thus, Cooper does not teach or suggest "A wireless link signal for wireless transceiver communication comprising a data burst including in temporal sequence: an initial predetermined synchronisation sequence; a data field carrying the data content of the burst; and a final predetermined synchronisation sequence," as recited in independent claim 11. In addition, Cooper does not teach or suggest "A wireless link signal for wireless transceiver communication comprising a data burst including in temporal sequence: a first predetermined synchronisation sequence; a data field carrying substantially all of the data content of the burst; and a second predetermined synchronisation sequence," as recited in independent claim 12. Thus, for at least this additional reason, independent claims 11 and 12 are patentable over Cooper.

In addition, in Cooper, "Each voice frame including the corresponding [Unique Word] UW marking the leading frame boundary has 117 msec duration and is comprised of subframes. A superframe comprises 3240 bits having 480 msec duration and is separated into four voice frames, each including a UW". (Cooper, col. 4, lines 35-41). Thus, Cooper describes the transmission of a signal data frame between a first unique word and a second unique word being associated with a further data frame. The bit stream transmitted consists of several of these data frames. In contrast, in Applicants' claimed invention the data field carries the whole data content of the burst. Thus Cooper

does not teach or suggest "a data burst including in temporal sequence: an initial predetermined synchronisation sequence; a data field carrying the data content of the burst; and a final predetermined synchronisation sequence," as recited in independent claim 11. Cooper also does not teach or suggest "a data burst including in temporal sequence: an first predetermined synchronisation sequence; a data field carrying substantially all of the data content of the burst; and a second predetermined synchronisation sequence," as recited in independent claim 12.

For at least the above reasons, independent claims 11 and 12 are patentable over Cooper. Claims 13-15 depend from claim 11 and claims 26-28 depend from claim 12. For at least these reasons, and further in view of their own features claims 13-15 and 26-28 are patentable over Cooper. Reconsideration and withdrawal of this ground of rejection is therefore respectfully requested.

In addition, Cooper teaches various channel formats for SCPC voice mode, SCPC in-band signaling voice mode, SCPC data mode, SCPC in-band signaling data mode, and SCPC call setup mode channels (Cooper, FIGs. 2-7). In none of these formats does Cooper teach or suggest the use of a guard band. Therefore, Cooper does not teach or suggest "wherein the channel comprises a plurality of slots sequentially separated by a guard band," as recited in claim 15. For at least this further reason, dependent claim 15 is patentable over Cooper.

Chennakeshu

Claim 18 was rejected under 35 U.S.C. §102(b) as being allegedly anticipated by Chennakeshu, U.S. Patent No. 5,400,362 (Chennakeshu). Applicants respectfully traverse this rejection.

Applicants submit that Chennakeshu does not teach or suggest every feature recited in Applicants' independent claim 18. Chennakeshu describes a Time Division Multiple Access (TDMA) system with the frame/slot structure of the "US digital cellular system for continuous base to mobile transmission" (Chennakeshu, col. 5, lines 18-36). Thus, each slot includes a preamble at the beginning of each slot, a Coded Digital Verification Color Code (CDVCC) at the middle of each slot and a preamble at the end of each slot. In between, two half slots are provided that are then divided into a plurality of N sub-slots. Chennakeshu does not teach or suggest a single long burst. Moreover, as each slot is immediately divided into two half-slots through the CDVCC code placed in the middle of each slot, a single long burst is precluded. Thus, Chennakeshu does not teach or suggest "periodic blocks of constant length each occupied by either one long burst or an integral number of short bursts of equal length," as recited in independent claim 18.

For at least these reasons, claim 18 is patentable over Chennakeshu. Reconsideration and withdrawal of this ground of rejection is therefore respectfully requested.

Rejections under 35 U.S.C. § 103

Chater-Lea and Scott

Claims 3 and 20 were rejected under 35 U.S.C. 103(a) as being allegedly unpatentable over Chater-Lea in view of Scott, U.S. Patent No. 6,388,997 (Scott). Applicants respectfully traverse this rejection.

Claim 3 depends from independent claim 1 and claim 29 depends from independent claim 4. The differences between the subject matter claimed in claims 1 and 4 and the disclosure of Chatter-Lea have been discussed above. Scott adds nothing to Chater-Lea that overcomes the deficiencies of Chatter-Lea relative to claims 1 and 29. For at least these reasons, and further in view of their own features, claims 3 and 29 are patentable over the combination of Chater-Lea and Scott. Reconsideration and withdrawal of this ground of rejection is therefore respectfully requested.

Chater-Lea and Kronz

Claim 6 was rejected under 35 U.S.C. 103(a) as being allegedly unpatentable over Chater-Lea in view of Kronz, WO 99/00931 (Kronz). Applicants respectfully traverse this rejection.

Claim 6 depends from independent claim 4. The differences between the subject matter claimed in claim 4 and the disclosure of Chatter-Lea have been discussed above. Kronz adds nothing to Chatter-Lea that overcomes the deficiencies of Chatter-Lea relative to claim 4. For at least these reasons and further in view of its own features, claim 6 is patentable over the combination of Chater-Lea and Kronz. Reconsideration and withdrawal of this ground of rejection is therefore respectfully requested.

Conclusion

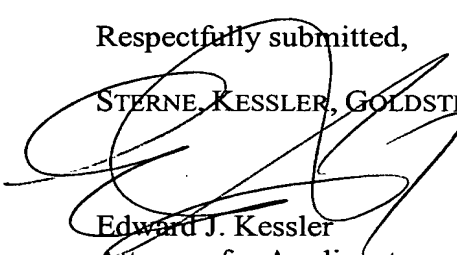
All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be

withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Reply is respectfully requested.

Respectfully submitted,

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